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ABSTRACT

This paper is for policymakers, advocates, and analysts who understand that the issues surrounding the introduction of more market-based mechanisms into education are complex and who accept the view that evidence is useful in sorting out the issues. It uses the market framework of demand, supply, and market pricing to organize the extensive but disparate evidence on the effects of market-based reforms in the United States, Chile, and New Zealand. It critically examines the relevant evidence on how choice and competition affect educational outcomes, especially for urban schools. It provides guidance to policymakers on all sides of this complex issue. After an introduction that examines the market framework and policy implications, four chapters discuss (1) "Demand: Parental Choice" (e.g., choice and competition, adverse impacts on schools left behind, and non-market arguments for expanding choice); (2) "Supply: Providing More Options within the Public School System" (e.g., site-based management and charter schools and education management organizations); (3) "Supply: Public Funding for Private Schools" (e.g., private elementary and high schools and the relative costs of private schools); and (4) "Market Prices and Alternative Mechanisms" (market prices and teacher labor markets). (Contains 63 references.) (SM)



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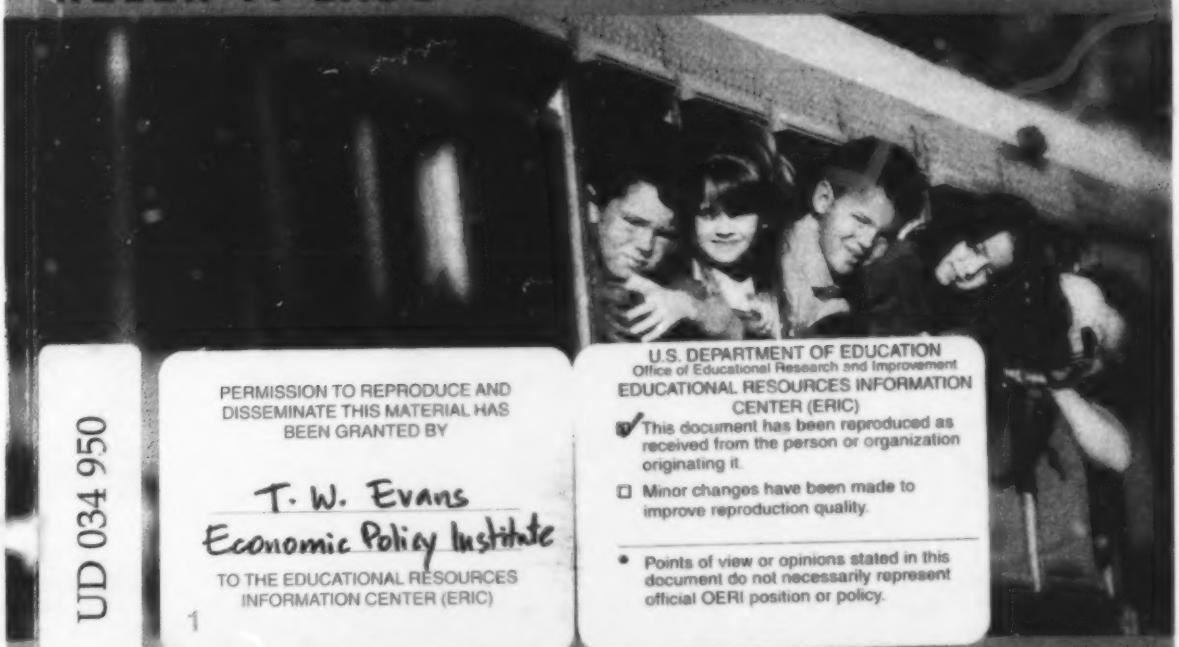
# MARKET-BASED REFORMS in URBAN EDUCATION

HELEN F. LADD



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# MARKET-BASED REFORMS IN URBAN EDUCATION

Helen F. Ladd

ECONOMIC POLICY INSTITUTE

Washington, D.C.

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# About the author

**Helen F. Ladd** is professor of public policy studies and economics at Duke University. Much of her current research focuses on education policy. She is the editor of *Holding Schools Accountable: Performance-Based Reform in Education* (Brookings Institution 1996) and is the co-author (with Edward Fiske) of *When Schools Compete: A Cautionary Tale* (Brookings Institution 2000), which draws lessons for the U.S. from New Zealand's experience with self-governing schools, parental choice, and competition. Over the past few years she has written articles on school-based accountability, market-based reforms in education, parental choice and competition, intergenerational conflict and the willingness to support education, and the effects of the federal Moving to Opportunity Program on educational opportunities and outcomes. As a more general expert on state and local public finance and education policy, Professor Ladd has also written extensively on the fiscal implications of growth, property taxation, education finance, tax and expenditure limitations, intergovernmental aid, state economic development, and the fiscal problems of U.S cities. She graduated with a B.A. degree from Wellesley College in 1967, received a master's degree from the London School of Economics in 1968, and earned her Ph.D. in economics from Harvard University in 1974.

# Executive summary

Educational outcomes for many urban students are unacceptable: dropout rates are high, test scores are low, and fewer students go to college compared with their suburban counterparts. Among the many ideas for reforming urban education are those that fit loosely under the rubric of market-based reforms. They include various forms of public school choice, charter schools, voucher programs, and the use of education management organizations. Policy discussions about such reforms tend to be highly charged, with some people so strongly in favor of them and others so strongly opposed that no appeal to evidence is likely to change their views. This paper is not for them.

Instead, this paper is intended for those who understand that the issues surrounding the introduction of more market-based mechanisms into education are complex and who accept the view that evidence is useful in sorting through the issues. To that end, this paper uses the market framework of demand, supply, and market pricing to organize the extensive but disparate evidence on the effects of market-based reforms. The evidence includes not only analyses of experiences in the United States, which are still very recent and limited in scope, but also analyses of the outcomes of market-based reforms in Chile and New Zealand.

Overall, the evidence suggests that the economic model of markets does not translate easily into the provision of compulsory education. Nonetheless, many of the concepts underlying education markets, such as consumer choice, flexibility for schools, and incentives for them to raise the quality of education, are worth pursuing. The challenge for urban policy makers is to find ways to introduce these ideas while at the same time promoting the public interest that, ultimately, provides the rationale for a publicly funded and compulsory education system.

The match between market reforms and education is imperfect, and understanding the reasons for that imperfect fit is an essential first step in moving forward with effective reforms. The main factors generating the misfit are the following:

- *Multiple interests.* Large-scale market-based reforms in education tend to privilege the interests of individual parents and children. Yet any education system has many stakeholders with differing interests. The government, for example, has broad goals such as educating



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citizens and training workers while students, teachers, administrators, local communities, future employers, and other stakeholders all have their own claims on the system. The legitimate interests of the various stakeholders might well conflict, and so, by privileging one set of interests over others, the market approach to education fails to achieve an appropriate balance.

- *Compulsory attendance.* Closely related to the public's interest in education is the fact that all children are required to go to school. As a result, public schools that are failing to meet the educational needs of their students cannot be shut down unless there are alternative schools for the children to attend. This reality means that a key mechanism of a typical market, namely the potential for firms to fail, does not function effectively in education.

- *Parental perceptions of school quality.* Because parents judge a school's quality in part by the socioeconomic composition of its student body, the playing field of school choice is not level, and "good" schools are not easy to replicate. Schools serving large proportions of low-income and low-performing students are typically at a disadvantage in the competition for students and for high-quality teachers and staff. As a result, the students in such schools are likely to be worse off after a market-based reform than they would be otherwise. The problem is not simply that low-income families might have insufficient information about a variety of schools or might not be able to afford transportation to another school — although these factors are relevant. More fundamental pressures are at work, keeping competition from being healthy and productive, especially for the most vulnerable students.

Supporters of market-based reforms predict that, even if the reforms hurt some students, they could still be beneficial if competition for students made schools more productive overall and increased average achievement levels. The evidence, however, does not provide much support for this prediction.

The most powerful evidence on the effects of competition emerges from the extensive Chilean experience with a voucher system. Competition from the newly expanded private sector in that country generated small positive gains in achievement among some middle-class public schools in Santiago, Chile's capital, and small negative effects in the rest of the country. Evidence from the U.S. is mixed as well. This mixed picture is important in that it clearly does not support the claim of those who argue in favor of

more parental choice on the instrumental grounds that it will make an education system significantly more productive.

Not surprisingly, there is evidence of greater parental satisfaction and possibly greater student achievement for students who are able to exercise expanded options to choose other schools. Many U.S. studies show, for example, that some students, especially disadvantaged students, tend to do better in Catholic private schools than their counterparts in public schools, even after controlling for measurable differences in the students' family backgrounds. Some questions remain, however, about whether researchers have adequately controlled for differences between the students who attend the two types of schools.

Recent privately funded voucher programs in New York City, Dayton, and Washington, D.C. minimize this evaluation problem because students have been randomly assigned to voucher and non-voucher groups. Analyses of these programs have found some positive achievement gains for students exercising the option of going to a private school but, somewhat curiously, only for African American students. Unfortunately data from the highly publicized voucher program in Milwaukee have not been made available since its expansion in the mid-1990s. The best of the early studies of achievement gains appear to show some gains in math but none in reading. Supporters of market-based reforms also argue that the reforms will help to promote innovation and eliminate inefficiencies caused by bureaucratic red tape. Giving schools more flexibility is a goal of the site-based management programs in many public school systems and is one of the driving forces behind the charter school movement.

Experience with these new forms of school governance is at best mixed. Although Chicago's experience with school site councils is often cited as a prime example of decentralized control, that program had little success and has been subsumed under a highly centralized accountability system. As for charter schools, generalizations are hard to make given how new they are and the great variation in charter school laws across the country. Available data suggest that, despite the hopes for charter schools, the amount of innovation appears to be relatively modest, especially in teaching and learning.

An alternative approach for eliminating red tape is for public schools to contract with education management organizations. The oldest and most widely known is the Edison Company, which also operates charter schools. Evaluating the success of the Edison program has been difficult because the company controls all the data. External, arms-length evaluations are clearly needed.

Expanding the choices available to parents about where their children

go to school would be desirable, especially for the parents of disadvantaged students whose choices are now so limited. In addition, providing more flexibility to schools has some clear advantages. However, any movement toward more parental choice and flexibility for schools requires safeguards. On the demand side, policy makers need to balance the preferences of parents against public interests. On the supply side, safeguards might include not allowing schools to select their own mix of students, limiting the number of charter schools, and implementing good support and accountability systems for schools. The struggling schools, in particular, will need enhanced resources and a greater claim on high-quality teachers and staff. Otherwise market-based reforms will generate a growing divergence between the "good" and "bad" schools to the ultimate detriment of not only the most disadvantaged students but also the education system as a whole.

# Introduction and overview

Educational outcomes for many economically disadvantaged and minority students living in large U.S. cities are unacceptably low. Drop-out rates are high, and test scores are low, especially for those students living in areas of concentrated poverty. Moreover, test scores for urban youth typically decline relative to national norms as the students progress through school. Yet without a good education, students have little hope of participating fully in the economic and civic life of an increasingly knowledge-based and globally competitive society. Not surprisingly, reform of urban education is high on the country's domestic policy agenda.

Among the many ideas for reforming urban education are those that fit loosely under the rubric of market-based reforms. Included among these ideas are various forms of public school choice, charter schools, voucher programs, and the use of education management organizations. Defining the full set of market-based reforms with any precision is complicated by the fact that many such reforms do not rely exclusively on market arguments for their rationale, and many are only partially market oriented. In addition, the reforms just mentioned leave out other options (for example, greater use of pricing mechanisms to allocate teachers among schools) that arguably fit more clearly in a market-based reform strategy.

Notwithstanding these definitional ambiguities, policy discussions about most market-based reforms in education tend to be highly charged, with some people strongly in favor of them and others adamantly opposed. For a significant number of proponents and opponents of market-based reforms, the basic issue is one of values. For some, parental choice is an end in itself. For others, any move to harness market forces fundamentally threatens public education. Thus the fight over parental choice and competition is often a "struggle for the soul of American education,"[1] and no appeal to evidence is likely to change these views. This paper is not for them.

For many others, however, the issues are more complex. These people recognize that any benefits of market-based reforms must be weighed

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against the costs; that greater reliance on market mechanisms might be desirable in some situations but not in others or might promote some goals and not others; and that some forms of market-based reforms might be more desirable than others. The challenge for these policy makers, advocates, and analysts is to structure the vast amount of information on market-based reforms in a productive way and to sort through the evidence to develop productive policies.

This paper is designed for the latter group of policy makers, advocates, and analysts. The goals are three-fold. The first is to use the straightforward market framework of demand, supply, and market pricing to structure what otherwise would be a complex and confusing mass of issues and information. The second is to take a critical look at the relevant evidence on how choice and competition affect educational outcomes, supplementing evidence from the United States with evidence from countries such as New Zealand and Chile. Unlike the United States, these countries have had many years of experience with market-based educational reforms. The third goal is to provide guidance to policy makers on all sides of this complex issue without promoting any one position. Hence the policy discussion focuses primarily on the types of constraints or safeguards needed to make the most appropriate use of market-based reforms in education.

## The market framework

The logical structure for evaluating market-based reform strategies for education in urban areas uses the three main components of a market: demand, supply, and pricing. The demand category includes reforms that increase the educational choices available to families and children. Supply-related reforms relate to the types of schools that deliver education in urban areas. Pricing describes reforms designed to increase the extent to which prices are used to balance supply and demand in education markets.

Traditional urban education systems are not particularly market-oriented in any of these three dimensions. Consider first the demand side of the market. Many families have traditionally had significant choice over which schools their children will attend, but the choices have been constrained in ways not typical of other markets. Most obviously, the choice among public schools has been linked to a family's decision about where to live, a decision that gives wealthy families more choice than poor families. A 1993 survey indicated that, among parents with incomes of $50,000 or more and children in public schools, 60% said that school quality was a factor in choosing a residence (cited in Viterittti 1999, 11). Evidence that families pay attention to school district boundaries in making their resi-

dential decisions also emerges in studies highlighting the higher housing prices that families are willing to pay in order to live in elementary school districts with better educational outcomes (Black 1999). In contrast to wealthy suburban dwellers who often have many choices, low-income families living in large cities typically have few options. For example, in the suburban area around Chicago, families can choose from among 95 high schools, most of them operated by different districts; in the city, a single district operates all 63 high schools.

Also on the demand side is the fact that the options available to families are biased in favor of public schools over private schools. If a family has the alternative of sending its children to a free public school, the rational family will choose the private school only if the *additional* benefits of the private school over and above those of the public school exceed the cost of the private school. Because residential choice and the private school mechanism are more readily available to high-income families than to low-income families, many disadvantaged families in urban areas have little choice over the schools their children attend.

With respect to the supply side, most students have access to a single type of supplier, typically a public school that enjoys relatively little autonomy. Only about 11% of all children attend private schools, and almost 80% of these are religious schools. Aside from private schools, the elementary and secondary public education system has made very little use of private firms to deliver basic education services; in addition the elementary and secondary system historically has not given public schools the autonomy characteristic of private suppliers. Although the introduction of school-based management has provided many public schools more flexibility than in the past, much of the operational control still remains in the district central office.

Finally, consider the role of prices. Outside of the private school sector, prices play little or no role in elementary and secondary education. Prices in the form of tuition and fees have typically not been used either to allocate students among schools or as a signal to establish new schools. Instead students have traditionally been assigned to schools based on where they live, and new schools have been built more in response to political and budgetary considerations than in response to excess demand for a certain type of school. It is also worth noting that prices are underutilized in the market for teachers. While market forces, including prices (that is, salaries), influence the distribution of teachers among school districts, price differentials play little or no role in allocating teachers within districts. Instead the single salary schedule for teachers has generated a situation in which the more senior and/or more able teachers have incentives and op-

portunities to transfer out of schools serving large proportions of disadvantaged students and to move to schools with higher performing students. Although not generally included in discussions of market-based reforms in education, the use of salary incentives to influence the distribution of teachers receives some brief attention in this paper.

Implicit in any marketplace is the concept of competition. In private sector markets, where consumers are free to choose among suppliers, competition for customers provides a strong incentive to provide high quality outcomes at low prices. Analogously, a major goal of market-based reforms in the education sector is to introduce more competition as an incentive for improved performance. Competitive pressures in private sector markets generate winners and losers, with losers going out of business. The international evidence cited below indicates that even in a market-driven education system governments find it hard to close failing public schools, especially if overall enrollments are rising and capacity is limited. Because education is compulsory, failing schools can be closed only if students have other options.

## Policy Implications

The bottom line is that the economic model of markets does not translate easily into the provision of elementary and secondary education. Moreover, the evidence does not support the claim that market-based reforms will generate large and positive effects on the overall productivity of the education system. At the same time, many of the concepts underlying education markets—such as consumer choice, flexibility for schools, and market incentives—are worth pursuing but only with appropriate safeguards.

One central question is whether competition for students that is induced by giving parents more choice over the schools their children attend will provide effective incentives for schools at the bottom of the performance distribution to improve. The international evidence shows not only that competition is unlikely to improve such schools, but also that it is likely to exacerbate their problems. In a competitive education market for students, schools that are unable to compete successfully for students will lose funding, find it increasingly difficult to attract high-quality teachers, and then end up with even greater concentrations of difficult-to-educate students. As a result, the quality of education received by the students remaining in these schools will deteriorate. Although school officials might ultimately decide to shut down such schools, that process is likely to take time and can only occur when there are sufficient places available in other schools.

Given this outcome, citizens must ask whether it is appropriate to

organize the delivery of education in such a way that it inevitably will make the students in some schools worse off. Some people might accept this as the price to be paid for improving outcomes for the students who are able to leave such schools. For others it provides a compelling argument for developing strategies to minimize the adverse effects of choice and competition on the students left behind.

The failure of choice and competition to solve the problems of the most distressed schools and their students does not by itself mean that they generate no educational benefits. Choice and competition might still make the overall education system more productive either by raising average achievement levels or lowering the costs of providing education or some combination of both. The evidence from the United States and other countries is at best mixed. Although analysts might wish for clearer and more consistent evidence of the effects of choice and competition on student achievement in either a positive or negative direction, the fact that the effects are unclear is nonetheless important. The evidence simply does not support those who argue in favor of more parental choice and competition on the instrumental grounds that they will make an education system significantly more productive than it would otherwise be.

More appropriate than large-scale market-based reform would be judicious movement in the direction of the market along one or more of its three dimensions as part of comprehensive reform packages. There are good reasons to expand parental choice, especially for economically disadvantaged families. The challenge for urban policy makers is to balance the benefits of parental choice against other values that justify the use of public funding for education and to build in appropriate safeguards to protect values jeopardized by market forces. To achieve these ends, some constraints will inevitably need to be placed on parental choice. One strategy is the use of some form of controlled, or managed, choice. In such a system, students would be assigned to public schools based largely on parental and student preferences, but attention would also be paid to social considerations such as the ethnic or socioeconomic mix of students in each school.

In addition, a case can be made for more options and flexibility on the supply side, not only as a way of expanding choice for families but also as a means of injecting new ideas and vitality into the education system. Crucial to such options, however, is a system for holding schools accountable to assure that public funds are being used appropriately. Finally, although it is not appropriate in urban education to use price more extensively as a mechanism for allocating students among schools, prices could be used more effectively than is now the case to allocate teachers among schools.

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Chapter 1

# Demand – parental choice

Parental choice can be expanded by breaking the link between residential location and schooling, by reducing the current financial incentives for parents to choose public schools, or by otherwise increasing the options available to parents. To break the link between residential location and schools, families can be given a choice of public schools within a school district or a choice of schools in other districts as well. To reduce the current financial bias toward public schools, education vouchers could be provided to families to lower the net cost to them of private schools, or tuition tax credits could be designed to achieve the same end. To provide families with more options, the number of places in charter schools, magnet schools, or theme schools of various types could be expanded.

Many states and urban areas already have some of these newer forms of choice. As of October 2000, 37 states had laws enabling charter schools, 32 had either mandatory or voluntary open enrollment policies, and four had some form of tax credit or tax deduction for education. Most striking is the rapid growth in charter schools. Starting from two in the 1992-93 academic year, the number of charter schools grew to 1,484 by September 1999 and to 1,700 by 2000. At the city level, 38% of the respondents to a recent survey by the Council of Great City Schools indicated that open enrollment was part of their overall reform strategy. Only two cities, Milwaukee and Cleveland, have publicly funded voucher programs, although a number of others including New York City, Dayton, Ohio, and Washington, D.C. have privately funded school voucher programs. Florida is currently the only state with a publicly funded, statewide voucher program. That program is still very small in that it is limited to students in a small number of failing schools.

## Choice and competition

Central to the case for large-scale market-based reform of education is the belief that expanding choice will increase the productivity of schools by

forcing them to compete for students. Many proponents of choice start from the conviction that the education system is bureaucratic and wasteful, especially in urban areas that are not subject to the competition among school districts that exists in suburban areas (Chubb and Moe 1990, Brandl 1998). Choice proponents make an analogy to the private sector: if power were shifted to parents and to all schools, public or private, competitive pressures would eliminate bureaucratic waste. A key element of this argument focuses on funding as a source of pressure. If families had more choice over the school their children attended and if funding were tied to students, schools would no longer have a captive clientele and thus would have no guaranteed funding. The resulting competition for students and funding would improve the education system by forcing the schools to be more responsive to parental wishes and to use their resources more efficiently.

To some supporters of expanded choice, this argument is both central to the debate and patently obvious. To them the success of the private sector of the economy is *prima facie* evidence that choice would improve public education as well. Others would like to see more evidence of the power of competition to generate effects of this type in the education sector before placing their faith in large-scale market-based reforms.

## Evidence from the United States and Chile

At this point, there is little direct evidence from the United States about the effects of competition on the productivity of the system as a whole. The recent voucher experiments have been far too small to generate much pressure on the traditional public schools, and evidence is only beginning to emerge from the charter school movement in states such as California, Arizona, and Michigan where charter schools are now common. Anecdotal and interview data suggest that some public school districts or schools have been responding in positive ways to the establishment of charter schools (Rofes 1998, Gresham et al. 2000, and Hess, Maranto, and Milliman 2000). For example, some school districts have set up after-school or all-day kindergarten programs, established new magnet schools, changed curricula, empowered teachers, or replaced principals. In addition, some principals appear to have promoted experimentation in teaching or pursued other forms of change that could be viewed as positive. Yet for a number of reasons, including the small number of students in charter schools relative to a rapidly growing student population, many school districts have not responded at all.

With respect to outcome measures such as test scores, a recent statistical

analysis of Michigan charter schools convincingly shows either no effects or negative effects of competition on the test scores of children in public schools located within five miles of a charter school (Bettinger 1999).[2] Although these findings might change as more charter schools are established and as existing charters expand and mature, they highlight the limited amount of direct evidence in the United States to support the view that expanding school choice is likely to improve educational outcomes in traditional public schools.

An alternative approach to measuring the systemic effects of choice and competition on the productivity of the education system emerges in research by Zanzig (1997), Grosskopf et al. (forthcoming), and Caroline Hoxby (2001). In contrast to studies of small and recently introduced voucher or charter school programs, this research is based on forms of choice and competition that are widespread and that have been in place for a long time among public school districts. Using the variation in the numbers of school districts within counties in California, Zanzig concludes that the presence of four school districts within a county generates gains in student achievement but that additional competition from more than four districts generates no further achievement gains. The policy implications he draws relate to the number of competing districts rather than to competition among schools. Grosskopf and others first develop estimates of the amount of inefficiency in each school district in Texas and then try to explain the variation in inefficiency as a function of market competition (again at the district level) and voter monitoring. They conclude that while market competition may reduce some types of inefficiency, it has no measurable impact on the productivity or technical efficiency with which school resources are used.[3]

Hoxby's research is the most ambitious. She makes use of the variation across metropolitan areas in the amount of competition school districts face naturally from public schools in other districts or from private schools to draw inferences about the effects of competition on overall school achievement per dollar of expenditure. Because she reports quite large and positive effects from competition, her analysis is widely cited by supporters of more educational choice.

In a recent article published in the prestigious *American Economic Review (2000)*, Hoxby concludes that metropolitan areas with many competing school districts have higher test scores and lower costs than metropolitan areas with fewer districts and hence that are less competitive. In two other studies (1995 and 1996), Hoxby measures the effect on public schools of competition from private schools and concludes again that such competition increases the achievement of students in public schools. If her

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conclusions are valid, they are potentially important as an indication of the positive outcomes that might ultimately arise from a large-scale expansion of choice. For reasons that are explained more fully in the appendix, however, it is premature to accept her results at face value. Although clever, the statistical approach she relies on in the first paper raises some unanswered questions, and her papers on private school competition have been challenged by other researchers who have used better data and alternative methods and have found no positive effects on public school achievement from competition from private schools.

Alternative evidence on the same issue emerges from Chile, which under a military government in 1980 dramatically decentralized its education system and introduced vouchers. At that time, the government started funding both public and private schools based on student enrollments multiplied by a per pupil voucher. Both religious and non-religious schools were free to enter the education market. After the reforms, enrollments increased significantly in private schools and declined in public schools. Cultural and political differences between Chile and the United States notwithstanding, Chile's experience is useful for the U.S. debate because of the boldness of the reforms and the sustained period in which they have been in place. Fortunately the reforms have recently been subject to careful analysis and evaluation (McEwan 2000 and McEwan and Carnoy 2000).

If competition increases achievement, one would expect the public schools in Chilean municipalities with large increases in private school enrollment to exhibit greater gains in achievement than public schools subject to less competition from private schools. That would be true, however, only if the analyst were able to control fully for all the factors that determine the growth of private schools in a municipality and that might be correlated with students' achievement. Well aware of these methodological problems, Patrick McEwan used panel data and a statistical strategy of "differences-in-differences" to sort out the effects.[4] His conclusions are, at best, mixed. His preferred estimates suggest that 15 years of competition led to modest gains in achievement of about 0.16 to 0.2 standard deviations in some public schools in Santiago, Chile's capital. But competition led to small negative effects in the rest of the country, which is home to three-quarters of the population (McEwan 2000, 137). He concludes that the results "neither refute nor provide strong support for the view that competition will lead to the improvements in the quality of public schools" (2000, 152).

In contrast to these mixed results for the effects of competition, McEwan finds much more consistently positive results for achievement

from targeted investments of teacher training and classroom materials. For these types of relatively inexpensive investments, he estimated gains in achievement of 0.1 to 0.2 standard deviations.[5] Thus the Chilean evidence suggests that if the policy goal is to increase student achievement, targeted investments are likely to be more productive than a large-scale market-based reform.

## The uneven playing field of school choice

My own research on New Zealand, which is based on interviews rather than careful analysis of test scores, suggests that any productivity benefits are most likely to emerge when competition among schools occurs on a level playing field (Fiske and Ladd 2000).[6] On a level playing field, schools start out with a relatively comparable mix of students and compete for the same types of students. My conclusion is consistent with McEwan's findings for Chile given that the positive gains in achievement generated by competition in Santiago seem to be produced by schools serving children from families in the middle levels of educational achievement. In many situations, however, the playing field of school choice is decidedly not level. Schools serving more affluent students and high performing students would have a competitive advantage relative to those that have historically served poor students. As a result, instead of improving the schools serving poor and minority students, large-scale market based reforms are likely to exacerbate their problems as they did in New Zealand.

The playing field is not level because of the tendency of many parents to judge schools largely by the composition of students in the school and to choose schools with students from more affluent and educated backgrounds. This tendency is reinforced when parents see average test scores by school because test scores are highly correlated with the socioeconomic level of a school's students. As a result, the main information that parents often have about school performance encourages them to enroll their students in schools that attract middle- and upper-class students, regardless of possible but unobservable differences in school quality that would be better indicated by some form of value-added measures.

A number of other factors also account for why student peers matter to parents interested in the quality of their children's education. Peers matter to some parents because of the potential positive spillover effects on motivation and learning from having their children in classrooms with other high-achieving and highly motivated students. Conversely, if a child is in a classroom with students who are unmotivated and low-achieving, that child might pick up some of the bad habits of fellow students. How

large such spillovers are in practice and even whether they are necessarily positive have been the subject of extensive but not fully decisive research (Jencks and Mayer 1990). What affects parental decisions, however, is not the actual effects of peers but rather parents' perceptions of their effects.

A related reason why the composition of a school's student body matters to parents has to do with the differences in processes and climate in schools serving students of different backgrounds. Studies in New Zealand document, for example, how schools serving low-income students must spend much more time and effort establishing basic student routines, such as getting students to show up for class with the materials they need and inspiring them to do their homework. In addition schools serving low-income students must devote more time to pastoral and disciplinary activities (Thrupp 1997). As a result, the students in these schools might suffer. Added to these considerations in the U.S. context would be concerns about safety within the school.

A third reason that parents may seek out schools with more affluent students is that such schools are likely to be more successful than other schools in attracting the most capable teachers. Given the single salary schedule for teachers, the main way teachers within a school district can improve their situation is by moving to schools in which the students are easier to teach. As a result, the new and inexperienced teachers fill the slots in schools with the lowest-performing students while the most capable teachers move to schools with higher-performing students. Finally, parents may seek schools with more affluent students because such schools are likely to have access to more resources such as parental contributions of both money and volunteer activities.

Evidence from many areas including Scotland, New Zealand, and the city of Chicago support the claim that parents have a strong tendency to choose schools in part because of the students who attend them. Survey evidence from Scotland, where parents have a statutory right to request placement in a school other than the designated neighborhood school, shows that parents who exercised choice "more often selected schools with higher mean socioeconomic status and higher mean levels of achievement" (Willms and Echols 1993, 49). In New Zealand, where parents have had extensive school choice since 1991, the evidence suggests that they attempt to move their children up the scale of decile rankings where low-decile schools serve largely disadvantaged and minority students, and high-decile schools serve more affluent and white students (Fiske and Ladd 2000, ch. 7; Ladd and Fiske 2001a). In Chicago, where high school students can choose among more than 60 high schools and where more than 50% of students

exercise the right to choose, school choice has led "to dramatically increased sorting by ability. High ability students are much more likely to opt out of their neighborhood school, and virtually all travel involves attending a school with higher ability peers" (Cullen, Jacob, and Levitt 2000, 1-2).

## Adverse effects on the schools left behind

Because families make choices in these ways, the challenges facing the schools not chosen by large numbers of parents—typically the schools serving the most difficult-to-educate students—are increased. The best evidence about the impact of choice on the schools and students left behind comes from New Zealand. Beginning in the late 1980s, New Zealand dramatically restructured its education system by transferring operating authority from the Department of Education, which was abolished, to school-specific elected boards of trustees dominated by parents. This initial reform was driven primarily by a populist/democratic vision of strengthening the voice of local communities in running the schools. Then the election of a conservative pro-market national government in 1991 altered the reform in the direction of market-based principles by introducing full parental choice of schools and forcing schools to compete for students.

Despite some obvious differences between the United States and New Zealand, the two countries are sufficiently similar, especially if one focuses on the urban rather than rural areas, for the New Zealand reforms to generate lessons for this country. New Zealand has a similar cultural heritage, and it is the size of the median American state (the relevant policy-making unit in the United States). In addition it has a significant minority population of Maori and Pacific Islanders who, like African Americans and Hispanics in the United States, tend to perform less well in the education system than their white counterparts.

The effects of the New Zealand reforms were mixed.[7] Parents quickly embraced the right to choose and exercised it to an extent that substantially altered enrollment patterns in the major urban areas. Although competition for students may well have benefited many students, including some disadvantaged students who moved to better schools, some schools found it difficult to keep or attract students and ended up with even larger concentrations of dysfunctional and costly-to-educate students. Because they were also losing funding and staff, these schools found it difficult to serve their students. New Zealanders refer to these schools, many of which were located in the poorest sections of urban areas, as "downwardly spiraling."

This outcome reflects in part some policy decisions that restricted the choices of low-income families. The decisions included no transportation

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subsidies in urban areas, permission for schools to charge activity fees (albeit noncompulsory), and, in the spirit of self-governing schools, granting oversubscribed schools the power to set their own enrollment policies (see below for further discussion). Even more important was the tendency of parents to use the composition of a school's student body as a sign of the school's quality. This behavior meant that schools with more affluent and white students were deemed of higher quality than schools with more poor and minority students. As a result, the latter schools found it difficult to compete effectively for students. Despite their autonomy and the strong incentives they faced to improve the quality of education provided, such schools were doomed to fail in the new educational marketplace (Ladd and Fiske 2001a). Not surprisingly, the gap in grades on school-leaving exams between the successful and the unsuccessful schools increased.

The market solution for downward spiraling schools is to let them fail and shut them down. In most cases, however, closing these schools was not a viable option in New Zealand largely because other schools were not available or not willing to serve the students from the failing schools. Schools that were "successful" had no desire to take in such students since doing so would adversely change the mix of students they served and diminish their reputations. For a few years, the New Zealand government tried to ignore the problem and to let market forces do their work. But significant pressure from the media, which highlighted the "forgotten schools," finally forced the government to acknowledge that many students were worse off and to intervene. Given the country's market-oriented philosophy, the Ministry of Education chose a minimalist form of intervention, one that focused on improving the management of the schools by bringing in new principals or beefing up the managerial skills of the existing principals. Only many years into the reforms did the ministry finally acknowledge that the challenges of these schools required more direct intervention that focused more on teaching and learning.

The bottom line is clear: large-scale expansion of parental choice and competition alone will not solve the problems of the most distressed urban schools. Moreover, the evidence is at best mixed on whether choice and competition will improve average outcomes for the system as a whole.

## Non-market arguments for expanding choice

Despite the negative effects of large-scale market-based reforms on the schools at the bottom, a number of powerful arguments that have little to do with the marketplace can be made for expanding parental choice. One of the most compelling in the United States is that the freedom to choose is a cherished

value. Given that the government generally permits people to choose where to live and where to work, it is reasonable to ask why they do not have more control over where their children go to school. This argument is particularly compelling for urban minority families and economically disadvantaged families since they have the least choice in the traditional system and their children end up in the lowest performing schools. Howard Fuller of Marquette University, a former superintendent of schools in Milwaukee, eloquently expresses this view when he makes the case for school choice as a means of empowering urban minorities. He says, "This is a debate about power.... This is about whether parents of low-income African American children should obtain a power that many critics of the choice movement exercise every day on behalf of their own children" (Fuller 2000, 1). Many African Americans apparently agree with him as is evident from polls showing strong support among them for voucher programs.[8]

Expanded choice may also promote important educational goals. Clearly, the traditional view that one size fits all when it comes to education is no longer accepted. Research shows that children differ in their learning styles and that people increasingly recognize that alternatives are needed for those who do not function well in the traditional public education system. More choice would allow families to make a better match between the needs of their children and what a school has to offer. A quite different form of this argument draws on communitarian literature to highlight the positive role that communities might play in delivering quality public services (Brandl 1998, Witte 1996). According to this view, by choosing schools for their children, families will create communities of shared values which will lead to greater cooperation and effort toward the ultimate goal of better education. Supporters of this view point to the shared community values within U.S. Catholic schools as an explanation for their greater effectiveness relative to comparable public schools (see, for example, Bryk, Lee, and Holland 1993).[9]

Choice undoubtedly confers benefits on the choosers. Multiple studies show that parents who exercise choice are more satisfied with their new schools than are the non-choosers. For example, a far greater percentage of private school parents (over 80%) are very satisfied with various aspects of their children's schools than is the case for public school parents (50-60%). And about 63% of parents of children in chosen public schools are likely to be satisfied as compared to 55% of parents of children in assigned public schools (Henig 1999, 74). Evidence from charter schools provides a similar picture. More than 4,000 student survey responses from 39 charter schools in 10 states show that 61% of the students thought their teachers were better in the charter school and about 50% said they had more interest

in school work. About 35% indicated no change, and 7.7% expressed less interest (Vanourek et al. 1998, 189). Finally, all the voucher experiments (some of which are discussed below) show evidence of greater parental satisfaction with the new schools. In the fifth year of the Milwaukee voucher program, for example, more than three quarters of choice parents gave their children's schools a "grade" of A or B. In Washington, D.C., 46% of the parents of choice students gave their schools an A as compared to an estimated 31% of all public school parents. Satisfaction levels were higher for all the major features of the school: academic program, school safety, parental involvement, and class size (Wolf, Howell, and Peterson 2000, 38).

Of course some of this increased satisfaction may reflect not the specific policies of the schools but rather a different, more congenial or more motivated, set of peers in the new schools. To the extent that families opt for schools in which their children will have peers with higher socioeconomic status, their behavior complicates the policy discussion because not all families can make that choice. Nonetheless, it is hard to argue that low-income families should be denied opportunities to benefit from such choices simply because they are poor.

## Policy implications

Because the freedom to choose is not the only value at stake, education policy makers need to weigh the benefits of expanding choice for some against the interests of other stakeholders in the system. Among those other stakeholders is the general public whose benefit justifies the public funding of education and the decision to make it compulsory. The problem is that these broader interests could be undermined if choices for individuals are unrestricted. Thus, the challenge for policy makers is to expand choice in such a way that these other interests are not compromised. In addition, if the purpose of an expanded system of choice is to meet the needs of disadvantaged families, the system must be carefully designed to assure that they, as opposed to only the more advantaged families, benefit from the reform. At a minimum, that requires paying for the costs of transportation for poor (if not all) children and the provision of information about schooling choices to all families (Levin 1998).

These policies can be costly, and, although important, they are not sufficient to assure a level playing field because of the tendency of families to use the mix of students in a school as a measure of school quality. Hence policies are also needed to support the schools left behind and to constrain choices in ways that promote the overall public interest in situations where individual choice undermines broader goals.

The evidence from New Zealand demonstrates quite clearly that more parental choice of schools will not solve the educational challenges of the most distressed schools and their students. Indeed, more choice is likely to be quite harmful to the students remaining in those schools. One lesson from New Zealand is that any expansion of options on the demand side requires an explicit strategy to focus on the educational problems of the schools that, through not fault of their own, cannot compete effectively. The New Zealand experience provides little guidance on the appropriate form of this intervention other than showing that it needs to be substantial and sustained and that it must focus not simply on management and governance but also on the fundamental determinants of teaching and learning. One key aspect of such a strategy would likely be close attention to the quality of the teachers in those schools (an issue which is discussed below).

Because families base their decisions in part on the mix of students in a school, a system of full parental choice would inevitably lead to greater ethnic and socioeconomic polarization of enrollment patterns among schools. It would also result in some schools being oversubscribed while others had excess capacity. From a societal perspective, greater polarization is not desirable, and from a practical perspective, some way would have to be found to allocate the scarce places in the popular schools and to make effective use of existing school facilities.

When choice is restricted to the public sector, the best solution is to introduce some form of managed or controlled choice. Under this approach, students would be assigned to schools based on their preferences in a way that balanced their interests against the interests of other students and the community as a whole. Such a system of controlled choice could seek to maintain a reasonable racial balance among the schools, as has been the case in Cambridge, Mass. since the early 1980s. Alternatively, such a system could aim to maintain a reasonable mix of students according to economic background and performance level. This approach now provides the basis of student assignments in Wake County, N.C., and Cambridge is in the process of switching from racial to economic balance in its controlled choice program. Economic balance rather than racial balance has also recently been advocated by Richard D. Kahlenberg in his book, *All Together Now: Creating Middle Class Schools Through Public School Choice* (Brookings Institution Press 2001). Attention to factors other than race or ethnicity may well be desirable given the high concentrations of minority students in some urban areas and the political, social, and legal issues that arise with respect to distinctions based on race and ethnicity.

Chapter 2

# Supply – providing more options within the public school system

Many urban school systems already provide various options on the supply side, but not all of these options should be included under the rubric of market-based reforms. For example, many urban districts have set up magnet schools that differ in significant ways from other public schools. But these differences were as a rule designed primarily to serve as a means of reducing segregation without relying on forced busing. Magnet schools are often located in predominately minority areas, and the previous schools served mainly minority students. By making them into magnet schools—often with a particular theme such as science or art or with a particular program such as the International Baccalaureate—policy makers were trying to make them more attractive to white students. As schools of choice, magnet schools have an aura of market-based reform, but they differ from the reforms discussed here in that their basic programs are dictated by higher level policy makers rather than by the schools themselves. The central notion of market-based reforms is that the schools themselves make their own decisions in response to the demands of current or prospective students.

## Site-based management

One strategy for providing more flexibility on the supply side is to grant existing schools more operational autonomy. This type of reform could well be part of a market-based reform strategy: if schools are to compete effectively for students, they must be given the flexibility to change their programs to respond to the demands of their customers. Market-based logic, however, is not the only rationale for giving schools more authority to manage their own affairs. Such a strategy would also be consistent with other reform strategies, including standards-based reform which requires more flexibility at the school level so that schools can respond to outcomes-based incentives. In addition, decentralizing authority to schools could be based on a populist rationale that has more to do with the political objective of empowerment and equity for disadvantaged groups than with

market incentives. The failure of education systems to meet the needs of significant segments of the population provides support for the view that school systems run by large professional bureaucracies lose touch with the communities they serve. One solution to this problem would be to decentralize authority to the school level.

Decentralization of authority has taken various forms in the United States. In some models, school principals are given more authority over budget, staffing, and program design. In others, decision making is delegated to teachers and on-site educators. Finally, in some models power is shifted to communities in the form of parent and community representatives (Ladd and Hansen 1999, 152). This third model is best exemplified by the 1988 Chicago reforms which shifted power from professional educators to on-site school councils. These were dominated by parents and community representatives who had significant control over budgets, management, program design, and personnel, including the right to hire and fire principals (Shipps et al. 1998, 1).[10]

Evaluation of such programs has been hampered by the multiplicity of objectives and practices that have been pursued and by the fact that in many cases the transfer of authority has been quite limited. Studies show few or no benefits in the form of a greater focus on teaching and learning (Weiss and Cambone 1994) and little effect on student achievement (Summers and Johnson 1996). In Chicago, where the changes were most extensive, the effects on student achievement were mixed at best. Some schools appeared to have improved performance, some remained unchanged, and some performed worse (Bryk et al. 1998).

## New Zealand's experience with self-governing schools

Additional evidence on the effects of shifting power to schools comes from New Zealand where, as mentioned earlier, authority to run schools was transferred in 1989 from the Department of Education schools to a parent-dominated board of trustees in each school. In the new system, the schools were provided funding from the government essentially on a per pupil basis (but with more money going to schools with large concentrations of difficult-to-educate students). Schools were given the authority to hire and fire principals, teachers, and other staff, to set the curriculum within the context of national curriculum guidelines, and to raise revenue in the form of noncompulsory fees from parents or from foundations and businesses.

Schools that were undersubscribed relative to the physical capacity of the school had to accept every student who applied. But in the spirit of self-governance, schools that were oversubscribed were given the author-

ity to draw up "enrollment schemes" to guide the selection process. In many but not all cases, these schemes included reference to some geographic catchment area defined by the school, others schemes essentially called for the principal to decide who was admitted, and still others admitted students on a first-come, first-served basis. Not surprisingly, many schools adopted schemes that allowed them to opt for the students who were easiest to teach. This left the other students—those with learning or behavior problems, those from disadvantaged homes, those with limited English—to be served by less popular schools.

There is little doubt that New Zealanders preferred this new arrangement to the centralized and bureaucratic system that it replaced. Fiske and Ladd (2000) report that virtually no educators they interviewed in their study of the New Zealand reforms wanted to go back to the old system. Three observations of the decentralized governance system are worth highlighting for policy makers in U.S. urban areas.

First, the system of full parental choice of schools, which was introduced in 1991, quite rapidly became a system in which schools did much of the choosing. By 1997 the proportion of students in primary schools that had enrollment schemes exceeded 50% in both the Auckland and Christchurch urban areas and 24% in the slower growing Wellington area. At the high school level, by 1997 the proportion of students in schools subject to enrollment schemes exceeded 55% in Auckland and Christchurch and was close to 50% in Wellington (Fiske and Ladd 2000, ch. 8). Consistent with the discussion above about the uneven playing field of school choice, the most popular, and hence oversubscribed, schools tended to be those serving the more affluent and white student populations. The shift to school choice meant that some children had trouble finding any school to attend. It also gave the oversubscribed schools a clear educational advantage over the other schools both because they were able to select the students who were easier to teach and because they had the luxury of tailoring a coherent educational program to the needs of those students. By contrast, the undersubscribed schools had to spread themselves quite thin to try to attract as many students as possible.

A second observation is that some schools struggled mightily under the new system. Evaluations of the governance and management performance of the New Zealand schools indicate that the schools serving the largest proportions of disadvantaged students tended to have the greatest problems in governing themselves. Compared to schools serving affluent students, these schools were five times more likely to be out of compliance with legal requirements. They also had less effective systems for assessing and monitoring student progress, for managing staff and finances, and they

exhibited less effective leadership and vision (Fiske and Ladd 2000, Table 4.4).

Finally, the new system did not generate much innovation. Several factors account for this outcome. Most importantly, the incentive system of the competitive model established in New Zealand did not encourage schools to look for niche markets. The strategic objective for most schools was to maximize the number of students (at least up to a school's capacity) and thereby to maximize funding, which was closely tied to enrollment. Once they reached capacity, the schools could try to gain control of the mix of students. As a result, schools turned out to be more interested in offering broad traditional programs aimed at attracting as many students as possible and less interested in designing a program targeted to particular types of students and families. There is yet another explanation for the lack of innovation. While the original architects of the New Zealand reforms envisioned each school having its own unique educational vision and objectives embodied in its school charter, the state quite quickly made it clear that local goals would be secondary to those imposed from the center (Fiske and Ladd 2000).

None of these outcomes in New Zealand is unalterable because different decisions about enrollment policies for oversubscribed schools, support services, and funding strategies could affect the results. The point is that attention to policy is required if other outcomes are desired.

## Charter schools and education management organizations

In the U.S. context, charter schools represent—in theory—the full embodiment of the concept of self-governing schools within the public system. Such schools are public in that they receive public funding and are ultimately accountable to the same public authority—typically a school district or a state department of education—as other public schools. What differentiates charter schools is that they are not operated directly by the government. Instead many of them are established and managed by voluntary associations of parents, educators, citizens, and others who come together around a common vision of education. Some charter schools are sponsored by preexisting organizations such as community groups, teachers' unions, churches, and even private businesses. Although some regular public schools have converted to charter status, the majority of charter schools are started from scratch. Each school has its own charter and is exempt from following many of the usual rules and procedures imposed on other public schools.

In practice, however, charter schools do not always embody the concept of a small group of people with a shared educational vision experimenting with new ideas. Increasingly, charter schools are being managed by larger for-profit firms. Charter school laws in at least 12 states allow this, and as of 1999-2000, about 10% of the country's charter schools were operated by either for-profit or not-for-profit ventures, referred to as education management organizations or EMOs (Horn and Miron 2000). Such firms usually need to operate many schools in order to benefit from the cost advantages of large scale. As a result, they tend to develop relatively standardized educational programs that can be widely implemented.

EMO management of charter schools is most common in Michigan. Some 70% of the 138 charter schools there were managed by EMOs in 1998-99, an increase from 50% the previous year. The large presence of EMOs in Michigan reflects the rules governing charters in that state. As is true in many states, Michigan offers very limited start-up funding for charter schools, and this creates a role for EMOs to play in helping new schools gain access to private capital. In contrast to other states, however, charter schools in Michigan receive full operating funding, roughly equal to the per pupil revenue received by traditional public schools. This generous funding makes the charter arrangement financially attractive to EMOs. In addition few of Michigan's charter schools are chartered by school districts. This fact increases the administrative autonomy of the schools and limits the influence of teachers' unions. Finally, the charter schools do not have to make contributions to the Michigan public school employee retirement system on behalf of the teachers employed by the EMO (Arsen, Plant, and Sykes 2000, 54).

Begun as recently as 1992, the charter school movement is still too young and too varied state to state to make many generalizations about how well it is working. In particular, it is not yet possible to determine whether charter schools are successful on average in increasing achievement and promoting innovation, or, on the negative side, if they create an undesirable distribution of students.

With respect to the level of student achievement, there are few formal statistical studies of student performance in charter schools that incorporate an appropriate control group, which would allow the researcher to predict how charter school students would have done had they remained in a traditional public school. To be sure, in their book, *Charter Schools in Action*, Finn, Manno, and Vanourek provide some "evidence" of achievement gains in charter schools from multi-state studies and from state accountability reports, but none of the studies cited would pass a rigorous

test. Without looking at the full universe of charter schools or a random sample of that universe, it is difficult to draw conclusions about the overall impact of the program. One recent study in Michigan concluded that students attending charter schools scored about 4% lower than students in traditional public schools in the same districts on various fourth- and fifth-grade state tests. This study is better than other comparable studies because of its serious, although still imperfect, efforts to control for student, school, and district characteristics (Eberts and Hollenbeck 2001).

Among the EMOs, Edison Schools is the largest for-profit manager of charter schools. Its recent annual reports claim increases in student achievement and high levels of satisfaction for students, parents, and teachers. The nation's two largest teachers' unions—the National Education Association and the American Federation of Teachers—have taken issue with these claims. The NEA acknowledges that Edison is the only for-profit venture to show an improvement in student learning but maintains that the results are more mixed than Edison's report indicates. In its analysis of Edison's performance, the AFT compared Edison schools in eight states to public schools that had similar demographics and concluded that the results did not match the company's claims (AFT press release 2000). Although the AFT acknowledged that the Edison program is based on solid educational research, it highlighted a number of shortcomings in the way the approach is implemented. These shortcomings include large class size, the use of inexperienced teachers, and high teacher turnover. Edison disputes some of these charges.

Sorting out who is right is not easy given that Edison controls all the data. External, arms-length evaluations are clearly needed. A recent study by Western Michigan University of 10 Edison schools that opened in 1995 and 1996 shows a very mixed picture and one that is far less positive than the one presented in Edison's annual reports. None of the schools shows a strong positive impact on achievement, and three of them show negative effects. Recognizing the importance of valid measures of its success, Edison has recently commissioned RAND to evaluate its schools over the next three years. Until these studies are made public and the data on which they are based is subjected to the scrutiny of others, one must be careful when making claims about Edison's educational successes.

Even independent evaluations will not answer a larger set of policy questions related to the use of EMOs. These questions arise because of the public funding of EMOS. Given that some students are easier and less costly to educate than others, will EMOs try to reduce costs by minimizing the number of disadvantaged students they serve? How will EMOs balance concerns about the bottom line with concerns about children? How

much influence will local communities of parents and teachers retain in schools run by large private-sector companies? Is management by private-sector bureaucracies better than management by public agencies, including school boards? Should EMOs, as managers of charter schools, be permitted to keep secret their expenditure of public funds simply because they are private firms, or should they be required to report their expenditure like other public sector organizations (Arsen, Plank, Sykes 2000, 55)? The potential for innovation is one of the main arguments for charter schools. Unconstrained by the bureaucracy of traditional public schools, charter schools have the freedom to experiment with new approaches to education. Despite these hopes for charter schools, the amount of innovation appears to be relatively modest, especially with respect to teaching and learning. Observations of charter schools in Michigan, for example, show a mixed picture. Some are pioneering distinctive curricular themes such as African-centered education but continue to teach it in traditional ways. Some schools are experimenting with new technologies, some are trying to connect schools and workplaces in novel ways, and some are using whole-school reform models that combine elements of research-tested programs. Most of the Michigan charter schools, however, are using traditional approaches to curriculum and instruction, and some of these are based on standard curriculum packages supplied by commercial publishers or management companies (Arsen, Plank, and Sykes 2000, 49-50). In Arizona, the key characteristic is variation in the types of curricula schools use, for example, back-to-basics, Montessori, bilingual, arts-based, and Waldorf programs. As investigators of the Arizona system have noted, "While charter schools have not yet invented new modes of education, they have made relatively unusual options more available to parents" (Gresham et al. 2000, 754).

One concern about charter schools was that they might disproportionately serve white and economically advantaged students. The aggregate data on charter school enrollments does not bear out this concern. Yet, as emphasized by Amy Stuart Wells and her colleagues (2000), disaggregated data by state, district, and neighborhood indicate that the individual schools typically are not very diverse. The more the data are broken down, the more racially and socioeconomically segregated the charter schools appear to be, and many of them are primarily minority schools. This outcome is not surprising given that "the vast majority of charter schools are created to serve students from a particular cultural or geographic community or those who share a similar educational philosophy or view or parental involvement" (Wells et al. 2000, 219). In addition, these authors find some evidence that within poor communities the

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relatively more advantaged of the disadvantaged are enrolling in the charter schools.

Whether these findings are cause for concern is subject to debate. One of the key unanswered questions is this: are the educational benefits emerging from school communities with shared values—especially benefits for disadvantaged students not well served by the traditional public school system—sufficiently great to offset any adverse social effects from the limited diversity within schools? Of course that question presumes that there are benefits for the disadvantaged students who choose charter schools. Wells and her colleagues provide some disturbing evidence that students of color are frequently enrolled in impoverished charter schools or in those with the least challenging curriculum (Wells et al. 2000, 173), but much more research on this issue is needed.

Recent research uncovers important differences in enrollment policies between market-oriented and non-market-oriented charter schools, differences that are highly relevant to the debate about the role of EMOs. In preliminary research on the charter schools in Washington, D.C., researchers found that the market-oriented charter schools (mainly those in a multi-school system that extends outside the District) differed in their enrollment policies from more community-oriented schools. Some 14.2% of all students were special education students in the community-oriented schools, but the figure was only 5.3% in the market-oriented schools. Similarly, the share of low-income students (as measured by their eligibility for free and reduced-price lunches) was 10 percentage points higher and the share of limited English-proficient students about 15 percentage points higher in the community-oriented schools than in the market-oriented charter schools (Lacierno-Paquet et al. 2001). These differences provide some support for the concern that profit-oriented EMOs will seek to increase profits by minimizing the costly-to-educate students they serve. The downside of the strategy is that these students may well become disproportionately concentrated in other charter schools or in the traditional public schools.

The single greatest challenge for the U.S. charter school movement is accountability. Scholars on both sides of the charter school debate have looked at accountability and found it wanting (Finn et al. 1997; Wells 1999).A good accountability system is essential to ensure that taxpayer dollars are being spent in the public interest. To some advocates of charter schools, the combination of parental choice and the charter renewal process provide adequate accountability. Parental choice provides accountability because parents have the power to remove their children from a school that is not meeting their needs. But this form of accountability fo-

cuses on the benefits to individuals and ignores the public benefits of education. In terms of the approval and renewal process, the expectation is that the chartering agency will approve only those applications that meet high quality standards.

The power to revoke school charters has been used in a few cases on the grounds of financial mismanagement and educational inadequacies, but it is likely to be too crude a tool to assure true accountability. One of the problems is that most states or other chartering agencies have not specified the standards for charter renewal clearly enough and up front. In states with sophisticated test-based accountability systems, charter schools can be held accountable for the tested subject areas along with other schools. But even this approach may not be sufficient since the public has an interest in assuring good processes as well as good outcomes and in strengthening the link between the two. Although a healthy and safe school environment is not a measure of educational outcomes, it is of considerable importance to the public. In addition the public has an interest in ensuring that a school is complying with the terms of its charter.

Much work remains to be done to develop adequate methods for holding charter schools accountable. That work is particularly challenging because of the tension between the standards movement with its focus on accountability for specific outcomes and the charter school movement with its focus on variety and innovation. North Carolina's experience illustrates the problem. That state's quite sophisticated school-based accountability system holds schools accountable for their students' gains on statewide tests that are closely aligned with the state curriculum. In the spirit of promoting variety, the initial plan for charter schools was to allow them to opt out of the state accountability system, provided they proposed an alternative method by which they could be held accountable. In practice, however, the state has not granted a charter to any school that proposed to opt out of the state accountability system.

A partial solution to the problem of charter school accountability could build on the inspectorate models used in England, New Zealand, and, most recently, Massachusetts.[11] Under the New Zealand approach (which is the one I know best), an independent agency would periodically review the operations of each charter school and evaluate it relative to the standards spelled out in the school's charter. The advantage of using an external review office of this type is that it can hold schools accountable for processes as well as outcomes. Moreover, during the start-up years of a charter school, the review office can help the school's operators understand where they are falling short. This approach to accountability works quite well in New Zealand largely because of the independence of the review

office, the high quality of its professional staff, and its strong leadership (Fiske and Ladd 2000, 2001). Although this approach will not solve all accountability issues, it could provide a useful complement to the current state systems, many of which are underdeveloped or rely exclusively on student test scores.

## Policy Implications

Central to the effort to make the supply side of public schooling more flexible is the view that individual schools are the key building block of an education system. Many of the reforms are designed to give schools more authority to craft their programs in ways that respond to the needs and desires of their "customers" and to use resources more efficiently. Several policy conclusions emerge from this discussion.

One is that schools should not be given unlimited power over all the decisions that affect them. In particular, in order to ensure fair access for all students, schools that are oversubscribed should not be given the power to choose which students will be admitted. In the same way that consumer choices need to be constrained to ensure that public as well as private interests are served, schools also need to be constrained. One constraint could be to require all oversubscribed schools to admit students by random ballot or to use a system of controlled choice to assign students to schools (as was discussed earlier).

Another policy conclusion is that any form of decentralized management (within traditional public schools or in the form of charter schools) requires support either from the central office or from some new institution set up for that purpose. The level of support needed will vary from school to school, with some schools requiring more support than others. Schools will make much better use of their autonomy if they are not required to reinvent the wheel in areas such as finance, property management, and professional development. Some schools, especially those serving students from low-income families, are likely to require major support in order to remain viable institutions.

As schools are given more autonomy, the importance of a good accountability system increases. The reasons discussed above in connection with charter schools apply more generally to the decentralization of authority to all schools. Neither parental choice nor a system based on test scores alone is sufficient for the purposes of holding schools accountable to the public. Although implementing the site-visit approach described above could be quite costly, a good system of accountability is essential.[12] This is not only because public funds must be used wisely but also because

many of the students served in charter schools are among the most vulnerable and should not remain in a charter school that is not meeting its charter responsibilities to serve them.

The use of EMOs raises many thorny policy issues related largely to their profit-making orientation. While it may be difficult to resolve some of these issues until school systems have more experience with EMOs, policy makers should in the meantime be vigilant in demanding rigorous evaluations by independent, high-quality research groups. In addition both traditional public systems and charter schools need to pay close attention to the nature of the contracts they enter into with EMOs. As was well publicized at the time, the city of Baltimore's contract several years ago with Education Alternatives Inc. (EAI) was seriously flawed. One egregious flaw of the original contract was that it called for the district to provide EAI with the average cost per pupil for the district as a whole despite the fact that EAI was managing only elementary schools which were less costly than high schools. In addition EAI was serving a below average proportion of the costly-to-educate, special needs students. It appears that the state of Maryland may have written a similarly flawed contract with Edison to run three schools in Baltimore that the state had taken over.[13]

A final policy conclusion relates to charter schools. Charter schools can potentially serve a useful role in the education system. Their intended role, however, will be best served if charters remain on the fringe of the education system rather than becoming the norm.[14] When charter schools are limited in number, they can be given the flexibility to be innovative, to offer alternative educational environments, and to take risks. Some new schools will be successful; others will not. Risks to the public or to individual children in these schools are not large if the schools are limited in number: the government can ensure that if a charter school does not meet the needs of a particular child, that child will have a guaranteed place in a traditional public school. Such a guarantee is essential in a compulsory education system.

Furthermore, if charter schools operate on the fringes of the state system, chartering agencies could, in principle, ensure that the founders of each school have the managerial capacity, fiscal skills, and educational experience needed for a reasonable chance to succeed. The chartering agencies can simultaneously resist the sort of heavy-handed regulation that would defeat the purpose of establishing charter schools in the first place. In addition, as long as charter schools are relatively few in number, fair access can be ensured by requiring schools to allocate their scarce places by some form of random balloting. The potentially high costs of a quality account-



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ability system provide a final argument for keeping charter schools on the fringe of the traditional education system.

Supporters of EMOs are likely to oppose this policy recommendation on the ground that limiting the number of charter schools will make it difficult for EMOs to gain a significant foothold in the education system. Although that may be true, the case for limiting the number of charter schools remains persuasive as long as the primary goal of charter schools is to give local community groups a means of implementing their alternative educational visions.

Chapter 3

# Supply – public funding for private schools

An alternative way of making the supply side more flexible is to permit public funds to be used for private schools through the use of vouchers or tuition tax credits.

## Are private schools more productive than public schools?

Of central importance to many supporters of voucher programs is the belief that private schools are more productive than public schools in the sense that they produce higher achievement at lower cost. If private schools do not produce higher achievement, it is hard to make the case that voucher programs for poor students will improve their educational outcomes. But even with no advantage with respect to achievement, public funding for private schools could be an attractive policy option to the extent that it reduced the total costs of education. Hence it is useful to examine the evidence on private schools with respect to both achievement and costs.

## Private high schools

Most of what is known about the efficacy of private schools relates to high school students. The reason is that most of the studies rely on national data sets such as High School and Beyond or the National Educational Longitudinal Survey, which begin to track students only at the high school level. In addition many of the studies focus exclusively on Roman Catholic schools, which represent the largest share of private schools and which, because of their location in urban areas and their relatively low tuitions, are most readily available to disadvantaged and minority students in urban areas.

In the early 1980s, James Coleman and colleagues (Coleman, Hoffer, and Kilgore 1982) used the High School and Beyond data to conclude that students in Catholic high schools outperformed their public school counterparts. That conclusion was challenged on the grounds that it did not

fully account for the differences in who enrolls in Catholic schools, a problem referred to as "selection bias." Since then a flood of new research has addressed this issue. Many of the recent studies show that Catholic schools appear to have little or no effect on student achievement but do have positive effects on the probability that students will graduate from high school and will attend college (Evans and Schwab 1995, Neal 1997, and Grogger and Neal 2000). In general the benefits seem to be greatest for urban minorities.

Even these more recent studies are open to question because of the difficulty of solving the selection bias problem in a fully convincing manner. Even if the researcher controls statistically for a large number of characteristics that might affect a family's decision to send a child to a Catholic school, the possibility remains that the choice is influenced by some unobserved characteristics of the family that would also affect educational outcomes. If that is the case, the estimated benefits of Catholic schools would be biased upward. In order to solve these problems, researchers have used many different "instrumental" variables (an appropriate instrument is correlated with the decision to choose a Catholic school but is not a direct determinant of educational outcomes). Many of the studies have used some function of whether a student is Catholic or the proportion of the county that is Catholic for this purpose, but others have argued against that approach on the grounds that Catholicism is a direct determinant of educational outcomes (Figlio and Stone 1999). In their own work, Figlio and Stone use a more complex set of instruments to look at private schools more generally. Although they report somewhat smaller positive effects on overall educational attainment than do other scholars, they find higher test scores in math for the subgroup of African Americans attending religious schools in big cities.[15]

## Private elementary schools: low-income students

Compared to the large amount of research on Catholic high schools, only a few studies focus on elementary schools. One credible study addresses the selection problem by comparing fourth-grade gains in a sample of low-income Catholic schools to first-grade gains. The study finds net gains in math and reading but only for white students in urban schools (Jepson, cited in the McEwan survey 2000, 16).

Most of our knowledge about the effects of private schools at the elementary level emerges from evaluations of the publicly funded Milwaukee Parental Choice program and privately funded programs in Dayton, Ohio, Washington, D.C., and New York City. All of these programs

restrict vouchers (or "scholarships" in the current lingo) to elementary school children (and in Washington to middle school students) from low-income families. Studies of these four programs provide the most reliable evidence because of their quasi-experimental or true experimental study designs.[16]

Three separate statistical studies of the publicly funded Milwaukee voucher program have generated three different conclusions about its effects on academic achievement. The first study by Witte, Stern, and Thorn (1995) concluded there were no significant achievement gains for those students who used a voucher to attend a private school. A subsequent study by Greene, Peterson, and Du (1997) concluded that by the third and fourth years of the program, students exhibited quite large achievement gains in both math and reading (0.1 to 0.5 standard deviations). Looking at the same data a third time, Cecilia Rouse (1998) found statistically significant gains in math but none in reading.

Of the three studies, the one by Rouse appears to be the most reliable largely because she was able to build on and improve upon the research methodologies of the two previous studies. Because the Milwaukee voucher program was not a true experiment—that is, one in which the participants are randomly selected to receive a voucher— the researchers had to determine the appropriate group of students to which the voucher-users should be compared. As the control group, Witte and his colleagues used a random sample of all students in the Milwaukee public schools and also a separate sample of low-income students. In contrast to this approach, Greene and his colleagues exploited the quasi-experimental nature of the program and used as the control group those students who applied for the program but who, through a random lottery process, were not accepted by their schools of choice.

Recognizing the limitations of using either the random sample of public school students or the unsuccessful applicants as a control group, Rouse used both of them but augmented the analysis by controlling for student characteristics that did not change over time.[17] The analysis of achievement gains was also complicated by the fact that many students who were given vouchers did not exercise them and by the non-random attrition of students from the sample over time. Rouse's sensitivity to differing ways of dealing with these statistical problems adds credibility to her conclusion that private schools *might* provide some academic advantages over public schools for urban minority children—at least in mathematics. Gains in achievement, however, are by no means guaranteed.

The Milwaukee program has received attention because it was the first publicly supported voucher program. One must be careful in general-



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izing from the Milwaukee experience, however, since the program was small and only secular private schools were eligible to participate during the years it was evaluated.[18] More recent studies of other privately funded voucher programs in Dayton, Ohio, Washington, D.C., and New York City provide new information on how voucher programs affect academic achievement. In contrast to the Milwaukee program, each of these programs was set up as an experiment with random assignment of children into the treatment group or into the control group. Participating families filled out baseline surveys of background information and, in principle, all children (in both the treatment group and the control group) were tested annually for the purposes of the evaluation. In contrast to Milwaukee, the private funding of these programs made it possible for students to use their vouchers in religious as well as secular schools.

Although the experimental design of these programs helps to solve the control group problem, it does not avoid some of the other problems that arose in the Milwaukee evaluation. These include, for example, the fact that not all students exercised their option to use a voucher and the fact that some students disappeared from the sample. Indeed, the problem of sample attrition is likely to be even greater in these subsequent studies because the testing of students was done on Saturdays by evaluators rather than by the school district as was the case in Milwaukee's publicly funded program. Enticing students—especially those not given vouchers and those who were given vouchers but did not use them—to come to the testing sessions presents a substantial challenge.

The impact of these three voucher programs on the achievement of participating students during their first two years was summarized in a recent paper by Paul Peterson and colleagues (2000). The researchers conclude that there were large positive gains of about 0.33 standard deviations for African Americans but no statistically significant gains for white or Hispanic students.[19] The gains for African Americans appeared in both reading and math but differed somewhat across the three sites, with the largest gains in Washington D.C. Although the researchers had previously reported declines in achievement for those African Americans using vouchers to attend middle schools in Washington, D.C., gains in the second year of the program were sufficiently large to produce significant two-year gains compared to the control group. Finally, the authors claim in their summary that "students' initial abilities and family background generally do not influence the results, because students were randomly assigned to test and control groups. Furthermore, all results take into account initial ability levels."

Despite the experimental design of the three studies, one should be

cautious about accepting the results at face value. Of particular concern is the fact that a large proportion of students offered scholarships did not use them. In Washington D.C., for example, only 53% of the students used the scholarship during the first year of the programs. Given that the scholarship did not cover the full cost of most private schools, it is reasonable to assume that those who used the vouchers came from somewhat more affluent or educated families than those who did not use them.[20] High attrition (up to 50%) at follow-up sessions compounds the problem, especially since it is not likely to be randomly distributed among the voucher users, those who could have used them but did not, and those who were in the control group.[21] As a result, some of the statistical benefits of the original random assignment design were lost. In light of these problems, the authors have been much too cavalier in dismissing the role of family background and initial abilities as factors contributing to the positive findings for African Americans. Together these concerns are likely to lead to an overstatement of the achievement gains from the voucher program.

These concerns are reinforced by the distancing of Mathematica Policy Research from the Peterson et al. summary of the voucher results. Since Mathematica worked with the Peterson group on the New York study, its views are highly relevant. According to Mathematica, the new two-year study of New York City low-income students in grades 3-6 who received vouchers to attend private schools "shows no significant differences in test scores between the scholarship and the control group" (Mathematica web page). Furthermore, Mathematica reports that there were no gains for Latino students in any grade and gains for African Americans only in the sixth grade. The sixth-grade gains in reading (but not in math) for African Americans were sufficiently large to generate modest positive gains when the results were averaged across all grades. This inconsistency across grades led Mathematica to suggest caution in interpreting the results for African Americans.

## The relative costs of private schools

Even if private schools did not generate greater achievement, they could still be more effective than public schools if they were less costly to operate. One supporter of voucher programs asserts that many private schools cost 50-60% less than public schools (Hoxby cited in McEwan 2000, 25), but she presents no data to support her assertion. The measurement of true costs is complicated by the fact that proxies for costs such as tuition payments or expenditures by the school are unlikely to account for all costs (see Levin 1998). Private schools receive additional resources in many

forms such as special fees and donations of money and time. In addition religious schools benefit from church subsidies, teachers working for below-market wages, and donations of land and buildings. Comparisons between public-sector and private-sector costs are further complicated by the fact that public schools typically serve a greater proportion of students who need costly services in the form of special education or vocational education. In sum, very little is known about the true costs of providing education in private schools, and hence care should be taken in making any claims about the efficiency of private schools relative to public schools.

From the narrower perspective of the government, the cost of providing vouchers to students so they can attend private schools might appear relatively low since the parents would typically be paying part of the tuition. There is, however, the possibility that some of the voucher funds would go to families who already had their children in private schools. The net budgetary impact would then depend on how many students used the voucher to switch from public to private school and how many students already in private schools used the voucher.

## Policy implications

The policy implications of these findings are not clear. Taken at face value, the Catholic school studies suggest that if existing Catholic high schools have excess capacity, a voucher program that enabled low-income students to attend a Catholic high school could well increase the average educational attainment of those students.[22] Similarly, the voucher experiments suggest that if the relatively inexpensive private elementary schools in an urban area have excess capacity, a means-tested voucher program that enabled low-income students to attend those schools might increase the achievement of some students. The evidence suggests, however, that, on average, achievement benefits at the elementary level are likely to accrue only to African American students; Latino students would not benefit at all. These differential effects by race clearly complicate the policy discussion.

The more difficult question is what would happen if such programs were expanded. All of the voucher programs studied were tiny. The Milwaukee program never had more than 1,000 students during the period covered by the studies. The New York program offered scholarships to about 1,300 students, the Dayton program to 515 public school students (and to another 250 students already enrolled in private schools), and the Washington D.C. program to 460 students (Peterson et al. 2000). Their small size means, first, that the departure of the students with vouchers had little or no impact (positive or negative) on the schools left behind.

Second, it means that the number of students participating in the programs was small relative to the available spaces in private schools. If the programs were to expand, any existing excess capacity in private schools would soon be used up. As a result, many low-income families with vouchers would not be able to exercise choice, or they would be forced to choose among schools that were newly established in response to the voucher program.

The nature of the supply response is hard to predict, and yet it is crucial to any discussion about the effects of a large publicly-funded voucher program. Support for voucher programs in the United States rests on the untested belief that new private schools would be established and that these would be of the same quality or better than existing private schools (Hill 1999). Given the absence of evidence from the United States on the potential supply response, we must turn to international evidence once again. The New Zealand experience is not very helpful on this issue. In that country, there was little or no expansion of supply in response to parental choice. A major reason was that the government continued to own the schools and, for budgetary reasons, was initially reluctant to build new schools or to expand existing schools when there was excess capacity elsewhere in the system. The best example of a start up in the New Zealand system is a school that catered to relatively wealthy families who could afford to pay the capital costs of starting a school. Thus, at most, the New Zealand experience highlights the high and potentially wasteful capital costs involved in setting up new schools.

Insights about the quality of new private schools emerge from the Chilean experience. The voucher program in that country led to a large expansion of non-religious and profit-maximizing schools that accepted vouchers in lieu of tuition. Careful analysis of fourth-grade achievement data shows that these new private schools were marginally less effective than public schools in producing Spanish and mathematics skills in Santiago; they were even less effective when they were located outside the capital city. Evidence suggests that the gap can be explained in part by different uses of resources in the secular private schools, for example, a greater percentage of teachers with short-term contracts (McEwan and Carnoy 2000, 227). At the same time, the evidence shows that Catholic schools appear to produce higher achievement than public schools, although the authors attribute that outcome to greater resources and not to greater productivity.

How directly transferable these findings are to the United States can be debated. Nonetheless they provide an appropriate cautionary note to those who support vouchers in the belief that they will generate a supply

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of high-quality new private schools. It is clearly a mistake for U.S. advocates of choice to use evidence from one type of private school, namely Catholic schools, to generalize to an expanded private sector that would inevitably include many different types of private schools.

Chapter 4

# Market prices and alternative mechanisms

Markets require a mechanism to deal with situations in which the demand for a particular item exceeds its supply. The standard mechanism is price. When the demand for good wine, for example, exceeds the supply, the price will rise to clear the market. The rise in price will induce consumers to buy a bit less and the suppliers to supply a bit more, so the quantity that consumers choose to buy ends up equal to what producers supply. Even in markets where supply is fixed, price plays a crucial role in allocating the limited supply among consumers. When the consumer item in question is enrollment in a desirable school, the balancing of supply and demand is considerably more complicated.

In a system of publicly funded compulsory education in which every child is entitled to a quality education, pricing is an inappropriate method of allocating students among schools because of its adverse distributional effects. Historically, the allocation challenge has been met by assigning students to schools based on where they live. The proscription of prices has been carried over to the charter schools, which are not allowed to charge tuition. Most states try to solve the allocation problem by requiring oversubscribed charter schools to select students by random ballot. With voucher programs, however, prices generally do play a role in determining which students attend a particular private school. In the various publicly or privately funded voucher programs in the United States, the size of the voucher typically falls short of many private school tuitions, and the private schools are permitted to charge tuition in excess of the amount of the voucher. These additional charges undoubtedly prevent some families from taking advantage of the voucher program. Indeed, the additional charges could help to explain the fact that only about half of the families receiving vouchers in the privately funded programs in cities such as New York and Washington, D.C. were able to use them to enroll their children in private schools

Theoretical work by Epple and Romano (1998) provides an abstract and highly stylized model that is useful for understanding the distribu-

tional implications of pricing and other aspects of voucher programs. They find that the introduction of a voucher program that subsidizes tuition at private schools is likely to have negative effects on two groups of students: the low-ability and low-income students who remain in the public schools and some of the students who switch from the public to the private sector. The first group is made worse off by the departure of high-ability students, which reduces the quality of the public schools. The second group of students is worse off in the Epple-Romano model because they would have preferred to stay in the public school, which is free, but are induced by the decline in public school quality to switch to the private school. Any gains in achievement for this group are more than offset by the payment of tuition to the private school.

Negative effects arise for large numbers of children in the context of this abstract model because of its assumption that the quality of a school is determined in part by the average ability of the students in the school.[23] This assumption is a simpler version—and therefore a more tractable version for an analytical model—of the behavior described earlier in the discussion of the uneven playing field of school choice. Given the various simplifying assumptions of the model, including the assumption that children are differentiated only by ability and their family's income, the model predicts that the introduction of a tuition voucher program will generate a hierarchy of schools. At the bottom will be a set of public schools serving the lowest-ability students; above that the private schools will be ranked by the average ability of their students. The introduction of a voucher program is beneficial for some low-income students in that it allows them to enroll in the higher quality schools. At the same time, students with low ability and low income remain in the public sector and, because of the outflow of higher ability students, end up worse off than they would be in the absence of the voucher program.

In subsequent work (in progress), the authors have determined the conditions that would be needed to eliminate the negative distributional effects of a voucher program. The only way to do this, they conclude, is to force the private schools serving voucher-supported students to submit to two major constraints: any oversubscribed school would have to accept students by random ballot, and no school would be allowed to charge more than the amount of the voucher. Stated differently, participating schools that were oversubscribed would be permitted to use neither prices nor their own preferences as a method of rationing the limited places in the school. These restrictions might well keep most private schools from participating in the voucher program or, alternatively, the private schools might pressure policy makers to remove these constraints.[24]

Interestingly, these same constraints typically apply to charter schools and make those schools more attractive than voucher programs to some observers (Hassel 1998). With such constraints, public funds end up being used either to pay for the education of disadvantaged students directly or to pay for the attendance of wealthier students at schools that are open to the disadvantaged. In that way, everyone continues to be guaranteed the same free public education whether it is in a public, charter, or private school.

## Market prices and teacher labor markets

Although prices are not appropriate as a means of allocating students among schools in a compulsory education system, greater use of market pricing may well be desirable for other aspects of the urban education system. The most obvious place for greater use of market prices relates to teachers. This is not the place to rehearse the case for higher teacher salaries in general or to present the arguments for and against a merit-based or competency-based salary schedule. Both of those raise a series of complex issues well beyond the scope of this paper (Ladd and Hansen 1999, 171–4). Instead, I simply would like to suggest that there could be a much greater role for prices in allocating teachers among schools within urban school districts.

The process that currently distributes teachers among urban schools is an institutional process rather than a market process. A major component is the internal transfer process. Although this process differs district to district, it can be characterized generally as follows. The district sets up a transfer pool made up of teachers within the district who voluntarily request a transfer to a different school and teachers who are involuntarily transferred because of demographic or other changes at their current school that make them redundant. The district typically requires schools with vacancies to hire from the transfer pool before making new hires, and it may give any teacher not selected the right to choose which of the remaining vacancies to fill. The typical outcome is that the schools considered to be better teaching environments end up with more experienced and higher-quality teachers while the schools with more difficult teaching environments have more vacancies and are more likely to fill their vacancies with involuntary transfers or inexperienced new hires.

The context for this outcome is both the single salary schedule and the fact that many teachers prefer to teach in schools where the students are more motivated. A logical market-based solution would be to pay high quality or master teachers (as measured in some independent manner) dif-

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ferentially high salaries to induce them to teach in the lowest performing schools. Given the recognized importance of teacher quality to student achievement, this type of market-based reform could potentially do more to improve educational outcomes for disadvantaged students than any of the other reforms currently included under the rubric of market-based reforms.

Chapter 5

# Conclusion

The economic model of markets does not translate easily into the provision of elementary and secondary education. Several factors account for this observation. The first is that large-scale market-based reforms privilege the interests of individual parents and children over broader public interests. Any education system has a multitude of stakeholders with different interests. The government has broad goals such as educating citizens and training workers, while students, teachers, administrators, local communities, future employers, and other stakeholders all have their own claims on the system. The legitimate interests of the various stakeholders may well conflict. By privileging one set of interests over others, the market approach to education fails to achieve an appropriate balance.

The second factor, which is closely related to the public's interest in education, is that all children are required to go to school. As a result, public schools that are failing to meet the educational needs of their students cannot be shut down unless there are alternative schools for the children to attend. Moreover, if private schools close, their students have to be assured access to some other school.

The third factor is that parents' perceptions of school quality depend in part on the socioeconomic composition of a school's students. For that reason, the playing field of school choice is not level. Schools serving large proportions of low-income and low-performing students are typically at a disadvantage in the competition for students and for high-quality teachers and staff, with the result that the students in such schools are likely to be worse off than they would otherwise be. The problem is not simply that low-income families may not have the information or may not be able to afford transportation to another school—although these factors are certainly relevant. More fundamental pressures are at work to keep competition from being healthy and productive, especially for the most vulnerable students.

The importance of the composition of the student body to school quality also means that "good" schools cannot easily be replicated. The

quality of a school depends not just on the resources provided to the school but also on the mix of students in the school. Thus it is naïve to assume that if schools serving large proportions of disadvantaged and low-performing students are closed as part of a competitive educational market, other "successful" schools will want to accept those students or that new "good" schools will be established. Other successful schools will be reluctant to accept large numbers of disadvantaged students for fear that changing the mix of their students will adversely affect how parents view the quality of education they offer; schools will also worry that having disadvantaged students will raise their costs. Moreover, any new school set up to serve these students will face the same serious educational challenges that regularly arise in teaching students from disadvantaged families.

Despite the uneasy translation of the market system to education, many of the concepts underlying education markets, such as consumer choice, flexibility for schools, and incentives for them to raise the quality of education for children, are worth pursuing. The challenge for urban policy makers is to find ways to introduce more choice, especially for children from disadvantaged families, and to give schools more operational flexibility and appropriate incentives. At the same time, policy makers need to promote the public interest that provides the rationale for a publicly funded and compulsory education system. Previous sections have suggested the nature of appropriate safeguards and constraints. On the demand side, they might require systems in which public interests along with parents' preferences are considered in determining where children go to school. On the supply side, they include prohibiting schools from selecting their students, limiting the number of charter schools, and implementing good support and accountability systems for schools.

Movement in the direction of more choice and competition will undoubtedly make the children who remain behind in the struggling schools worse off than they otherwise would be. That fact alone does not rule out the expansion of parental choice. Instead it highlights the need for policy makers to pay attention to the mix of students in the various schools and to provide additional support for the struggling schools. Indeed, one of the potential indirect benefits of a system in which parents have more extensive choice might well be to focus public attention and support on the schools that are not able to meet the needs of their students. That support might take the form of additional incentives to induce high-quality teachers and staff to work in such schools

Although this concept of supporting struggling schools might be an anathema to true believers in markets and market-based reforms in education, an analogy could perhaps make it more palatable. In the National

Basketball Association, the lowest ranked team at the end of the season gets first pick of the new talent for the following year. This mechanism helps to restore balance among the teams and improves the competitive health of the whole system, all to the benefit of both players and fans.[25] If competition among schools is to be healthy and lead to better outcomes for all students, analogous mechanisms in education will be needed. The struggling schools will need enhanced resources and a greater claim on high quality teachers and staff. Otherwise there will be a growing divergence between the good and bad schools, to the ultimate disadvantage not only of the most disadvantaged students but also to the education system as a whole.

APPENDIX

# Estimating the effects of competition on public school outcomes

As discussed in the text, Caroline Hoxby's research on the effects of competition through the traditional modes of competition among public schools or the effects of competition from private schools on public school quality is potentially very important for the debate about newer forms of choice and competition. In this appendix, I raise some questions about her conclusion that competition increases the achievement of students in public schools.

## Competition among public schools

By far the most interesting and provocative research on the effects of competition among public schools on student achievement is Caroline Hoxby's paper, "Does Competition Among Public Schools Benefit Students and Taxpayers?" (*American Economic Review*, 2000). The paper provides empirical evidence in support of the view that more competition among school districts in a metropolitan area generates higher student achievement (and also lower expenditures). At the risk of doing an injustice to Hoxby's rich and creative analysis, I explain in this appendix why I remain skeptical of her findings. My focus here is on her findings relating to student achievement.

Her approach can be described in the following simplified form:

$$\text{Achievement} = f(\text{Competition, Other Determinants}) \quad (1)$$

Achievement refers to the achievement of students living in a metropolitan area (measured by test scores and other outcome gauges for a sample of individual students in the area). Competition refers to the amount of competition among school districts within the metropolitan area, and the term "other determinants" refers to a multitude of other factors that affect achievement, some of which are measured at the level of the students and some at the level of the metropolitan area. Hoxby estimates this equation using data from several sources which she has matched geographically at the school district or metropolitan area level. The achievement data come from two national samples: the National Education Longitudinal Survey (NELS) for eighth-, tenth-, and twelfth-grade test scores and the National Longitudinal Survey of Youth (NLSY) for other outcome measures.

Central to the analysis is how Hoxby makes the concept of competition among districts within a metropolitan area operational. Although she describes several measures, her preferred one is defined as 1 minus the Herfindahl index of enrollment shares. The Herfindahl index (H) is calculated as the sum across all districts of the square of the enrollment share in each district within the metropolitan area. Thus, for example, if a metropolitan area has only one district (as is the case for Miami-Dade), the enrollment share in that district is 1 and the index of competition is 0 ($=1-1^2$). If a metropolitan area has 10 districts, each of which had 10 percent of the students, the index of competition would be 0.90 ($=1-10(0.1)^2$). The index of competition can range from 0 (no competition) to 1 (perfect competition). In her sample of 316 metropolitan areas, the index has a mean of 0.69 and a standard deviation of 0.27. In reporting effect sizes, Hoxby simulates the effect of moving from no competition to full competition.

When Hoxby estimates equation (1) by the standard method of ordinary least squares, she finds that competition has no statistically significant effect on student achievement.[26] She argues, however, that this result is incorrect because it does not account for the possibility of bias associated with a variable left out or with reverse causation. She uses the ethnic heterogeneity of an area as an example of a possible left-out variable on the grounds that more ethnically diverse metropolitan areas may demand more jurisdictions and influence student achievement. To explain the idea of reverse causation, she provides that following example:

> Consider an educational market that contains a district that has, for idiosyncratic reasons, a highly productive administration. Other districts will want to consolidate with the productive district so that its talented administrators can serve more students. But such consolidation will lessen the degree of observed choice. Similarly, households with school-aged children will want to move into the highly productive district, exchanging places with households that do not have any school-aged children. But such moves will lessen the degree of observed choice or any measure of choice that is sensitive to how many children each district serves (p. 1214).

Hoxby then concludes that this reverse causation will bias downward (toward zero if the true effect is positive) the estimates of the effect of choice on achievement (and also on productivity which is measured as achievement relative to spending). Her solution to this problem is to introduce an "instrumental" variable (or variables) to eliminate the problem of reverse causation. The goal of this statistical technique is to replace the problem variable (the index of competition) with a clean version of that variable, one that has no reverse causation built into it. For this purpose, Hoxby uses the numbers of rivers and streams in each metropolitan area as instruments. In effect she uses

for the final analysis only that portion of the variation in competition across areas that is correlated with the rivers and streams in each metropolitan area. Any findings about the effects of competition on achievement that emerge from her analysis occur only because of the correlation between rivers and streams and student achievement.

To be a good instrument, a variable has to meet two criteria: first, it must be correlated with the variable of interest (in this case, the index of competition), and second, it cannot, according to any plausible theoretical model, be a direct determinant of student achievement. Hoxby makes a plausible case that her rivers and streams variable meets these criteria. Most people would agree with her, I think, that it is hard to tell a plausible story of how rivers and streams would influence student achievement directly. She provides empirical evidence in her appendix (Table 2) to support her claim that they are correlated across metropolitan areas with her index of competition.

Using rivers and streams as an instrumental variable, Hoxby concludes that competition has a large and positive effect not only on student achievement but also on other educational outcome variables. Her results imply that metropolitan areas that have full competition would have eighth- and tenth-grade reading scores about one-third of a standard deviation higher than those in areas with no competition.[27]

I am skeptical of her results mainly for two reasons:

First, I do not find Hoxby's example (cited in full above) very convincing as a story of potential downward bias in the estimated coefficient of the competition variable. Also I find the example confusing since it seems to imply that the productive district is initially large. If the productive district within the metropolitan area were initially small, growth in that district would increase, not reduce, the measured degree of competition. More generally, I see little or no reason to predict a relationship between the average level of student performance in an entire metropolitan area and the movement of students among districts. Note that if the movement of students among districts that Hoxby describes is more common in metropolitan areas in which achievement is already high relative to other areas, the bias would go in the other direction. In such areas, any efforts of parents to move their children to even more productive small districts would lead to a higher level of measured competition and higher achievement which would generate an upward bias in the OLS estimates. In general I would find her story more convincing if her analysis were at the district rather than at the metropolitan level.

The interpretation is further complicated by the fact that although she is using cross-sectional data, the story of reverse causation has to be a story of adjustments over time. I do not deny the possibility of some form of reverse causation even at the metropolitan level that could potentially bias the estimated coefficient. My priors, however, are that the bias is likely to be small. For that reason, I would place more weight on the simple ordinary least squares estimates than does Hoxby.

Second, I have some reservations about the appropriateness of rivers and streams as instruments. The interpretation Hoxby would like to give to her analysis is that the number of rivers and streams in an area affects educational outcomes only through their correlation with the index of competition, and, to her credit, she provides some partial tests in support of that hypothesis. There are, however, other possible explanations for her results. The number of rivers and streams in a metropolitan area could well be correlated with some other variable—for example, the presence of colleges and universities in a metropolitan area or the years since Anglo-American settlement—that could also be correlated with student achievement.[28] Because Hoxby provides no data in the paper on the number of rivers and streams in each metropolitan area (or, for that matter, of her index of competition), it is not possible for any researcher to look more closely at these key variables. Given likely regional differences in the number of rivers and streams, the fact that Hoxby included in the achievement equation indicator variables for the nine census tract regions helps to alleviate my concern somewhat but not completely given the relatively large size of those regions.

In sum, Hoxby's analysis is sophisticated and ambitious. Nonetheless, questions about whether there is indeed a serious problem of reverse causation and about the use of rivers and streams as an instrumental variable lead me to be more comfortable with the ordinary least squares results at this point. The OLS results imply that competition within metropolitan areas has essentially no effect on average student achievement.

## Competition from private schools

Hoxby (1995 and 1996) has also argued that competition from private schools exerts a positive influence on student achievement in public schools. Other researchers, however, have found no such effect (see, for example, Sander's study of private school competition in Illinois). Here I briefly summarize a recent study by Robert MacMillan (2000) that casts additional doubt on Hoxby's argument.

MacMillan contributes to the literature by highlighting the importance of collective parental pressure which operates through a "voice" mechanism on schools. He also examines the extent to which parental pressure and competition from private schools are complements or substitutes. He hypothesizes that collective parental pressure on schools exerts a positive impact on student achievement. The question then is how competition from private schools interacts with parental voice. Theoretical predictions are unclear. By giving parents the power to withdraw their children from a school, competition from private schools could enhance the power of the parents' voice within the public schools or, alternatively, it could reduce parental power if the more active and involved parents leave or if significantly fewer parents remain. The actual impact is an empirical question.

Using data from the first wave of NELS on eighth graders from 738

public schools, supplemented with other data on counties and school districts, MacMillan estimates the impact of collective parental pressure, the effects of private school competition, and the interactions between the two on student achievement in the public schools. He uses as his measure of parental pressure the percent of parents who are active in a school's parent-teacher association (PTA). Recognizing that the amount of parental involvement could be influenced by the performance level of students in the school, he uses parental participation in other, non-school organizations as an instrument in his estimation process. Based on this sensible approach, he concludes that parental pressure represents an important channel through which parents have a positive impact on school quality.

In striking contrast to Hoxby, he finds that competition from private schools has a negative effect or no effect on public school test performance. This result occurs because greater access to private schools (throughout the school district) weakens the positive impact of collective parental pressure at the school level. In other words, parental pressure and competition are substitutes in the education production process.

MacMillan's approach differs from Hoxby's in a number of ways. First and most important, his analysis includes measures of parental involvement. Second, Hoxby's analysis is at the level of the individual while MacMillan's is at the school level. Third, Hoxby used the NLSY data set with data from the late 1970s while MacMillan used NLSY data from the late 1980s. Fourth, the students in Hoxby's sample were slightly older. Fifth, MacMillan used a different strategy for addressing the problem of reverse causation (the problem that the amount of competition from the private schools might be influenced by the public school's achievement level). In particular, he used various county-level variables—such as income level, proportion of adults with college degrees, proportion of African Americans and Catholics—as instruments to "clean" the private school competition variable. Importantly, however, MacMillan's attempts to modify his approach (using the NELS data throughout) to be more similar to Hoxby's in each of these various dimensions did not change his results. Thus he presents quite a compelling case that competition from private schools does not generate higher achievement within public schools.

# Endnotes

1. This phrase is the subtitle of Peter Cookson's 1994 book on school choice.

2. This study is convincing because of the attention it pays to various statistical problems including the possibility that the location of charter schools may be influenced by the performance of public schools. To deal with this simultaneity problem, the author takes advantage of the role of public universities in chartering schools to develop an exogenous instrumental variable.

3. The usefulness of this approach is heavily dependent on the validity of the efficiency measures. The authors estimate inefficiency by using an input distance function approach that is designed to measure the greatest proportional reduction in inputs that can be achieved without reducing output. One criticism of such an approach is its inability to control adequately for the differential costs of educating differing types of students.

4. This statistical strategy involves comparing changes (that is, differences) in test scores in one period to changes in test scores in the previous period. The advantage of this approach is that it controls both for unobserved determinants of achievement that are constant over time for individual schools and for unobserved time trends in each school's achievement (McEwan 2000, 137).

5. The annual costs of these investments are estimated to be $26 per pupil.

6. Some of my more recent research based on surveys of New Zealand principals and teachers generates an even less optimistic picture of the role of competition. That research uses the fact that, in the new competitive environment, some schools faced more competition than others to isolate the effects of competition on the quality of student learning as perceived by teachers and principals. In contrast to the overall reform package, we found that competition among schools consistently reduced the quality of education (Ladd and Fiske 2001b).

7. The absence of national tests makes it impossible to determine the effects of the reform on student achievement.

8. Current and consistent data on trends in black support for vouchers over time are hard to find. A 1997 report on the Phi Delta Kappa/Gallup poll indicated that 62% of black respondents, as opposed to 47% of white respondents, supported a proposal in which the government paid all or a part of the tuition for students who chose to attend nonpublic schools. The most recent poll, which uses different wording, shows sharply lower support for vouchers among all respondents (down from 44% in 1997 to 39% in 2000) but does not break responses down between whites and blacks.

9. Expanding choice of schools could also promote some non-education goals. For example, by breaking the link between residential location and place of residence, a system of expanded choice might reduce the extent of residential segregation in urban areas. Some families who now choose to live outside the city to take advantage of better suburban schools might well choose to move to the city under an expanded choice option (Nechyba 1999).

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10. In 1995 authority was recentralized, but the school councils were retained. For a discussion of the effects of the 1988 reform effort plus the debate about whether the 1995 recentralization of authority represented a dramatic policy turnaround or the logical extension of decentralization, see Bryk (1999).

11. For a description of the Massachusetts model, see Finn, Manno, and Vanourek (2000, ch.6).

12. Costs will vary depending on the approach used. A recent estimate suggests that the cost to Massachusetts of a site visit to a charter school with 250 students is about $17,000.

13. See Darcia Harris Bowman, "Private Firms Tapped to Fix Md. Schools," *Education Week*, February 9, 2000 and Kalman R. Hettleman, "A Fair Test of State Privatization," *Education Week*, September 13, 2000.

14. The following arguments are developed more fully in Fiske and Ladd (2001).

15. The authors use instrumental variables reflecting (1) state labor laws such as "duty to bargain" or "right to work" laws; (2) interactions between these variables and the median income in the county, and (3) interactions between these interactions and the socioeconomic status of the student's family. These instrumental variables or various subsets of them meet the criteria of being highly correlated with a student's selection of public or private school and yet have no direct affect on a student's achievement. The authors justify the state labor laws as instruments on the grounds that state policies affect the actual or perceived distribution of performance but not its mean level. The interactions allow for a differential response to these differences among families with different income (Figlio and Stone 1999, 121-22).

16. Evaluations of programs San Antonio, Indianapolis, and Cleveland can be found in Peterson and Hassel 1998.

17. The technical term for the procedure she used is "individual fixed effects."

18. No data have been made available for evaluation purposes since 1995.

19. To emphasize the policy significance of this gain for African American students, the authors compare it to the gains produced in the Tennessee class size experiment and claim that the former exceeds the Tennessee gains by 50%.

20. In the New York program, scholarship users had mothers with somewhat higher educational attainment and lived in families with higher incomes (about $2,700 over the average annual income of $10,400). The most frequently cited obstacles preventing parents from sending their children to the preferred schools included cost, transportation problems, and lack of space at the school (Mathematica Press Release 2000).

21. In the New York program, the second-year testing sessions were attended by 69% of the students offered vouchers and 62% of the students in the control group. The voucher users were told that the renewal of their vouchers depended on their participation in the program. The members of the control group were compensated for their expenses and told that they could automatically reapply in a new lottery if they participated in the follow-up sessions (Peterson et al., 19).

22. Although the research focuses on high schools, most researchers are not careful to sort out whether the students in their sample attended Catholic schools throughout their schooling or just during their high school years. For policy purposes, the distinc-

tion matters. To attain gains at the level found in the literature, students might have to go to Catholic elementary and middle schools as well as high school.

23. It should be noted that Epple and Romano do not incorporate into their model any differences in productivity between public and private schools, nor do they allow for the possibility that competition from the private schools would make the public schools more productive. Given that the empirical evidence on these productivity issues is at best mixed, their approach seems appropriate. Only if the effects of competition were large and positive would their conclusions about the distributional effects not hold.

24. New Zealand's experience with its "targeted individual entitlement" voucher program is fully consistent with this assertion. Policy makers initially intended for participating schools to select students randomly but the private schools insisted on the right to select their own students (Fiske and Ladd 2000, 301).

25. This analogy comes from Charles V. Willie and Michael J. Alves (1996, 9).

26. According to Hoxby's Table 4, based on the OLS specification, competition has small negative but statistically insignificant effects on eighth-grade reading and 10th grade math scores, and statistically significant negative effects on 12th grade reading scores.

27. Impact on 12th grade scores is even larger, but without some discussion of dropout rates, I do not know how to interpret the 12th grade results.

28. In a critique of Hoxby's paper in the appendix of a survey paper on competition and school efficiency (Rouse and McLaughlin 1998), Cecilia Rouse notes that the variable "years since Anglo-American settlement" enters one of the expenditure equations with a negative sign and is worth exploring further as an explanation for her finding that competition makes public schools more productive by reducing spending.

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